

Using the Web-based Map for the Environmental Data Management System

Idaho Department of Water Resources

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Geographic Information Systems – Internet Mapping
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Instructions

Welcome

The Environmental Data Management System (EDMS) is a central database designed to house Idaho ground water quality data and well characteristics from several state agencies and provide for easy access via the internet. An explanation of the EDMS can be found on the Idaho Department of Water Resources web-site at <http://www.idwr.idaho.gov/WaterInformation/EDMS/default.htm>. This web-based, interactive map facilitates exploration and retrieval of those data.

You will be able to select wells and water quality characteristics, individually or by class, and view or download water quality test results for the records retrieved for the parameters you entered. It is possible that there will be no test results for a well even though it is a part of the EDMS. Due to the possibility of selecting a large number of wells and/or water quality characteristics, the results from your query may be a subset of the actual records available. You will receive a warning to change your parameters to narrow the candidates returned for your query. In other words, this application restricts queries so that you cannot download the entire database – see **Limitations** in **Appendix A**.

This web mapping application does not require any GIS experience or any software other than your internet browser. As with all of the information provided by the department, via the internet, you will be asked to acknowledge and agree to the site's **Conditions of Use**.

Conditions of Use

The Idaho Department of Water Resources is maintaining this web site as a public service. The Idaho Department of Water Resources strives to ensure that all technical data and other information made available to the public through this web site is accurate, complete and in conformance with the Idaho Public Records Act. Neither the Department of Water Resources nor the State of Idaho, however, assumes any legal responsibility for the accuracy or completeness of the information contained on this site.

Persons using information from this site for official purposes, or other purposes, for which accuracy and completeness are required, are hereby notified that they should first verify the information with the public records or other primary sources from which the information was obtained.

Please see **Appendix C – Glossary**, at the end of this document, for an explanation of the GIS and internet mapping terms used in this document.

Getting Started

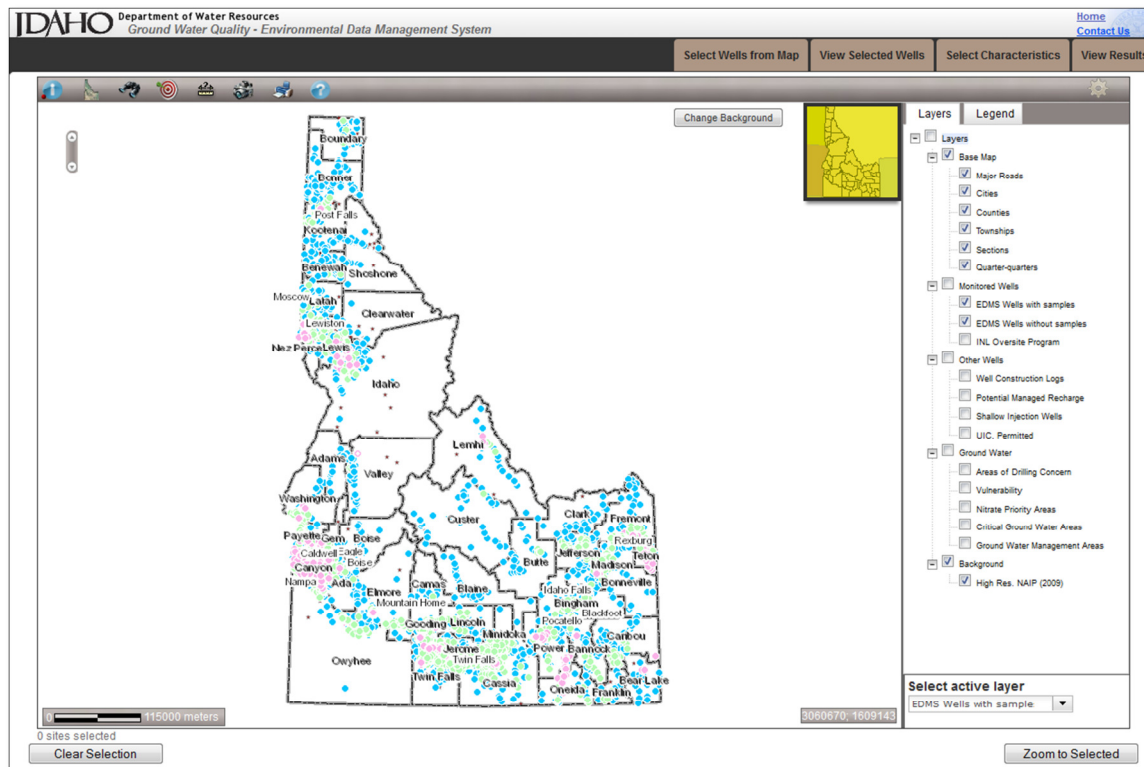
Use your browser to navigate to the following address: <http://www.idwr.idaho.gov/Groundwater/EDMS>
The web-page should look like this:

The screenshot shows the 'Ground Water Monitor' web application. At the top, there is a header with the IDAHO Department of Water Resources logo and the text 'Ground Water Quality'. Below the header, there is a navigation bar with 'Home' and 'Contact Us' buttons. The main content area is titled 'Query Ground Water Monitoring Data'. It contains a paragraph explaining the site's purpose: 'This site gives you access to the Idaho Environmental Data Management System (EDMS), which is a water-quality database maintained by the Idaho Department of Water Resources. It contains information about ground water wells within Idaho (as opposed to those used for purposes other than extracting water) collected by state and federal agencies. More information about the EDMS and the state's efforts to monitor ground-water quality can be found at the main page for the [Statewide Ground Water Quality Monitoring](#) program.' Below this, there is a paragraph: 'Select wells from the map and then select water-quality characteristics for which you wish to view/download test-results. If you have previously selected wells or water-quality characteristics, those selections should have been preserved if you are using the same computer.' Another paragraph follows: 'Due to the large amount of data associated with a single well, the number of wells available per download per query may be limited. [View Users' Manual.](#)' At the bottom, there is a checkbox labeled 'I have read and agree to the [Conditions of Use.](#)' and two buttons: 'Select wells from a map' and 'Select water quality characteristics'.

Once you have agreed to the conditions of use, the buttons at the bottom of the page will be enabled so that you use the application. If you have not previously used the application, click the “Select wells from a map” button. When you use this application it stores the wells and water quality characteristics for which you chose to view details.

Using the Map

On first use, the map will show the entire state of Idaho.



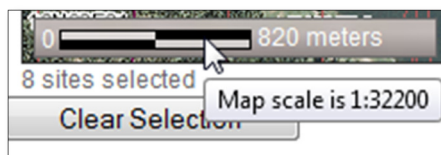
You must use the **navigation tools** to position the wells you wish to select in the center of the on-screen map and magnify it in order to view your area of interest. You can display the entire state of Idaho within the on-screen map or magnify the view so that you can see just a few acres.

The terms "zoom in" and "zoom out" mean to view a smaller portion of the earth or a larger portion, respectively. Displays showing the size and location of the area shown on the map. The map-scale and map-coordinate indicators are located at the lower corners of the map.

Map Scale Indicator



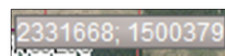
This example shows (approximately) how many meters there are in one map inch.



Hover over the scalebar to display the map scale reciprocal.

Map Coordinate Indicator

The coordinate indicator displays the position of the mouse cursor on the map. The default coordinates are IDTM NAD83.



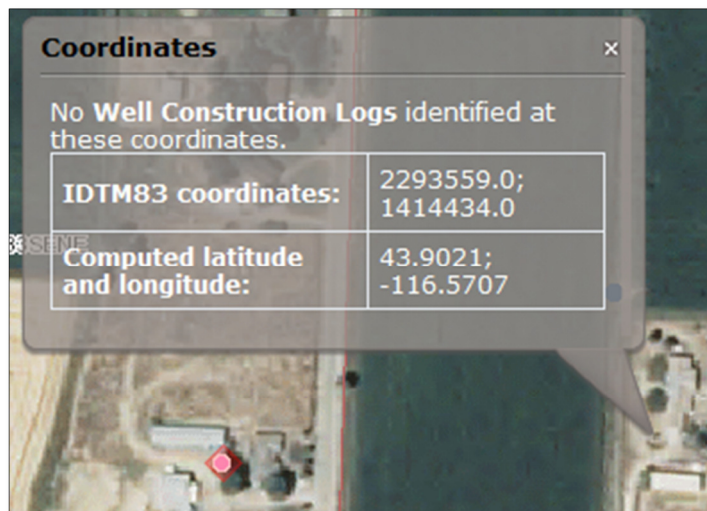
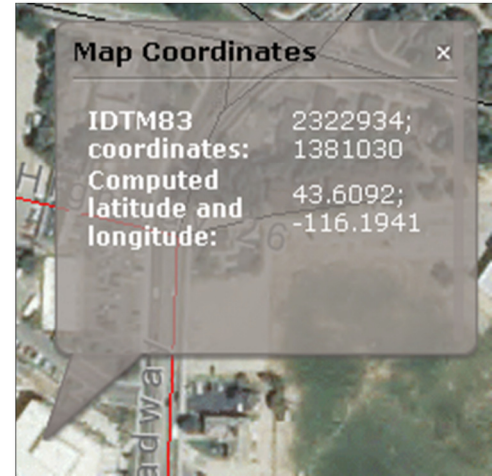
The units used to display the scale or coordinates can be changed using the **Options** menu; see the section of this documentation entitled **Options Menu**.

Displaying Coordinates of a Point

The IDTM coordinates are shown in the lower, right corner of the map, as explained in the previous section. You can click on any point on the map to display the coordinates of that point.*

If you do not have an *active layer* selected you will see the IDTM coordinates and the latitude and longitude.

* The only time you won't see this (or similar) display is when you have clicked on a *feature* belonging to the *active layer*. In that case, you will see the table of records for data related to that *feature* (as shown in the discussion on the *identify tool*).



If you have set an *active layer* to identify features on the map, but click a point where no features from the active layer are present you will see an error message and the coordinates.

You would get a similar screen if, for example, an *EDMS Wells with samples* feature (for which there is not well driller's report) was clicked but the *Well Construction Logs* layer was active.

Navigation Tools

Within the interactive map you can display the entire state of Idaho or magnify the view so that you can see just a few acres or city blocks. The tools used to resize and reposition the on-screen map are called navigation tools. This application has no visible navigation controls except for the *zoom slider*, which is positioned on the map at the upper, left-hand corner.

Zoom Slider: Used to double the scale of the map or reduce it by half. Click on the upper button to see more detail. Click on the bottom button to view a larger area.



Resizing the Map

Zoom In – use any of the following methods:

- Click the upper arrow on the *Zoom Slider*.
- Press the *plus sign* (+) on the keypad.
- Roll mouse-wheel forward.
- Hold down the **Shift** key, click on the map and hold the button down while dragging the mouse cursor to outline the area you wish to see.

Zoom Out – use any of the following methods:

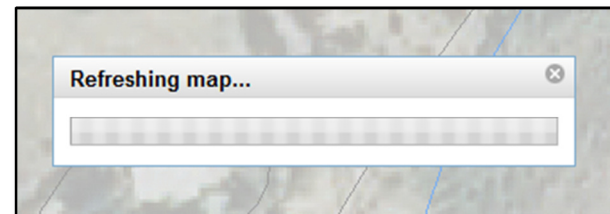
- Click the lower arrow on the *Zoom Slider*.
- Press the *minus sign* (-) on the keypad.
- Roll mouse-wheel backward.
- Hold down the **Ctrl** and **Shift** keys, click on the map and hold the button down while dragging the mouse cursor to outline an area of the map. If you cover a large area, you will be zoomed out a little bit; if you cover a small area you will be zoomed out a lot.

Moving the Map

Pan tool: click on the map and drag it to a new position. Apple Mac users can use the **Command** key in the same manner that **Ctrl** key is used on Windows PCs.

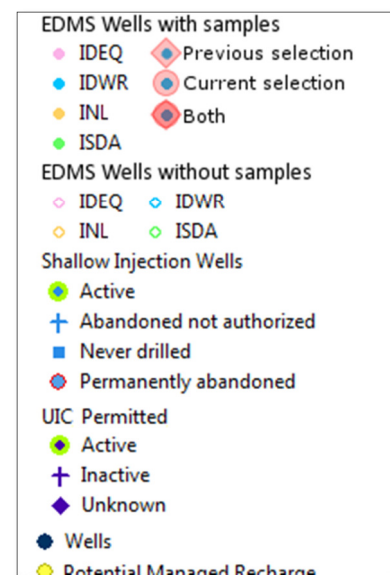
The Progress Bar

When you use any of the navigation tools Although not a “tool,” the progress bar appears when you resize the map or perform queries and tells you when the application is waiting for information. If it remains after the map has redrawn, you can close it by clicking on the “X” in the upper, right corner of the window.



The Legend

The legend displays a list of all of the layers and the graphics or symbols which represent them. This legend includes the graphics used to display the current state of well-selection. Those sites previously selected, if any, will be highlighted with a diamond. Those which have just been selected using the *select sites* tool (explained below) will be represented with a circle or a circle overlaying the previously rendered diamond (the well was previously selected and is part of the current selection, which might represent a well you wish to remove from the query set).



The Toolbar

The toolbar, located above the upper, left-hand corner of the map, holds all of the tools you need to find, select and view details for features from the various layers on the map.



Identify

The *identify* tool is active when you start the application. When it is active (indicated by the small dot at the lower, left corner of the icon), click on any point on the map to display the attributes of the record, from the active layer, at that point. As discussed in the section entitled *Displaying Coordinates of a Point*, if you click on the map away from any features, the IDTM coordinates and latitude/longitude for that point will be displayed in a pop-up window.



Show entire state

The *show entire state* tool will set the map extent so that the entire state of Idaho is visible.



Find by...

The *find* tool is used to “find” a location in Idaho using various methods, including entering northing/easting pairs in several coordinate systems.

Find a Location in Idaho

Coordinates - lat/lon, IDTM, UTM...

▼ Street Address

Address:

Find Address

For best address search results try to enter data in this format: Address, city, state (or Address, city, ZIP)

Samples:

322 East Front St., Boise, Idaho
900 North Skyline Drive, Idaho Falls, 83402
1341 Fillmore St., Twin Falls, Idaho, 83301

▼ Tax Parcel

▼ Public Land Survey Legal Description

▼ Stream Name

Find a Location in Idaho

Coordinates - lat/lon, IDTM, UTM...

Lat-Long (Degrees and Decimal minutes) ▼

Lat-Long (Degrees Minutes Seconds)

Lat-Long (Decimal degrees)

Idaho Transverse Mercator NAD83

UTM Zone 11N

UTM Zone 12N

UTM Zone 11N (NAD27)

UTM Zone 12N (NAD27)

StatePlane East FIPS1101

StatePlane Central FIPS1102

StatePlane West FIPS1103

StatePlane East FIPS1101, feet

StatePlane Central FIPS1102, feet

StatePlane West FIPS1103, feet

StatePlane East FIPS1101 (NAD27)

StatePlane Central FIPS1102 (NAD27)

StatePlane West FIPS1103 (NAD27)

Convert and Map

▼ Tax Parcel

▼ Public Land Survey Legal Description

▼ Stream Name

You may zoom into a portion of Idaho using any of the following options:

- Map Coordinates, such as latitude/longitude, IDTM, UTM, etc.
- Street Address (as shown above)
- Tax Parcel number
- Public Land Survey (Legal description)
- Stream name

Other Tools



Search

The *search* tool allows you to find features in a layer by searching selected fields for user-specified text, by querying a value or range of values for a specific field or by using geometry (point, line or polygon) to highlight all features from a given layer. The results of the search are presented in a table that allows you to see some of the key attributes of the selected features. If you have selected the layer named **EDMS Wells with samples**, you will be allowed to use the search-results to modify the list of sites for which you will obtain water quality results. Please read the discussion in the section entitled **Appendix A – Searching for Features**.



Measure

The *measure* tool is discussed in the section entitled **Appendix B – Measuring Distances**.



Capture

The *capture* tool allows you to save a picture of the current map. This is useful for making electronic “slide presentations.”



Print

The *print* tool creates an 8 ½” x 11” map, complete with legend, scale-bar, creation date and annotation. For best results, you must set your browser to print in landscape mode.



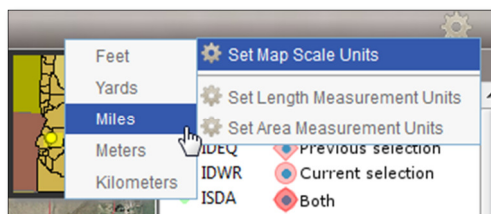
Help

The *help* tool displays this document in another browser window.

The Options Menu

The options menu allows you to change the units displayed on the map for the following:

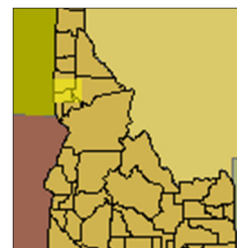
- scalebar
- length measurements
- area measurements
- coordinate display



The Overview Map

The overview map shows the portion of Idaho you are viewing in the main map window. Normally, you will be viewing a very small area which will be shown as a point on the overview map.

If the area you are viewing is quite large it may be displayed as a rectangle on the overview map.



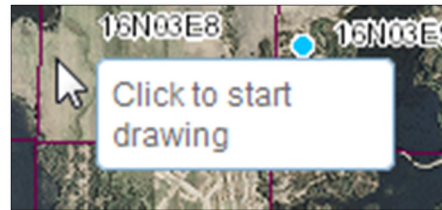
Selecting Wells

In order request information from the EDMS, you must select the wells on which to query. Click on the **Search** tool, located on the toolbar, then click on the specific search tool you wish to use to find the wells of interest.



Use of the *search* tool is explained, in detail, in the section entitled **Appendix A – Searching for Features**. In the following example, the **EDMS Wells with samples** layer will be selected using the polygon-selection tool, which will allow you to build a list of well-sites for which you will obtain water quality results.

Once you have selected the tool, when you move the mouse over the map, you will see the tooltip “Click to start drawing.” If you do not see that tooltip, select the polygon tool again.

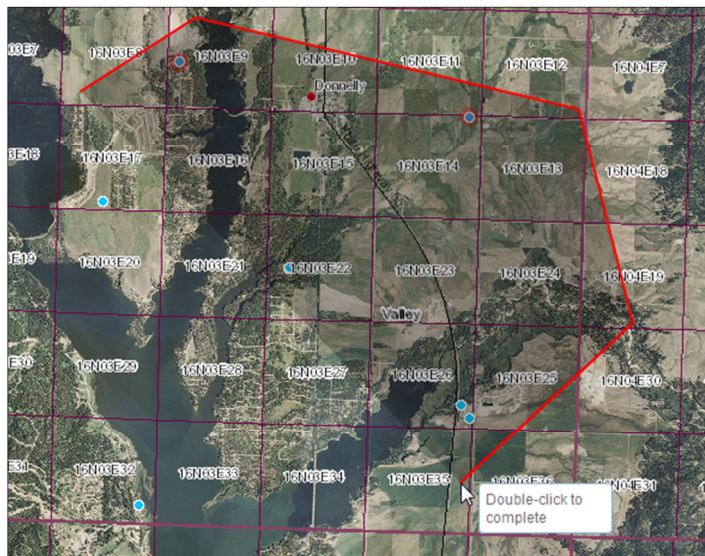


Once you have clicked the initial point of the polygon, the tooltip will change to “Click to continue drawing.”

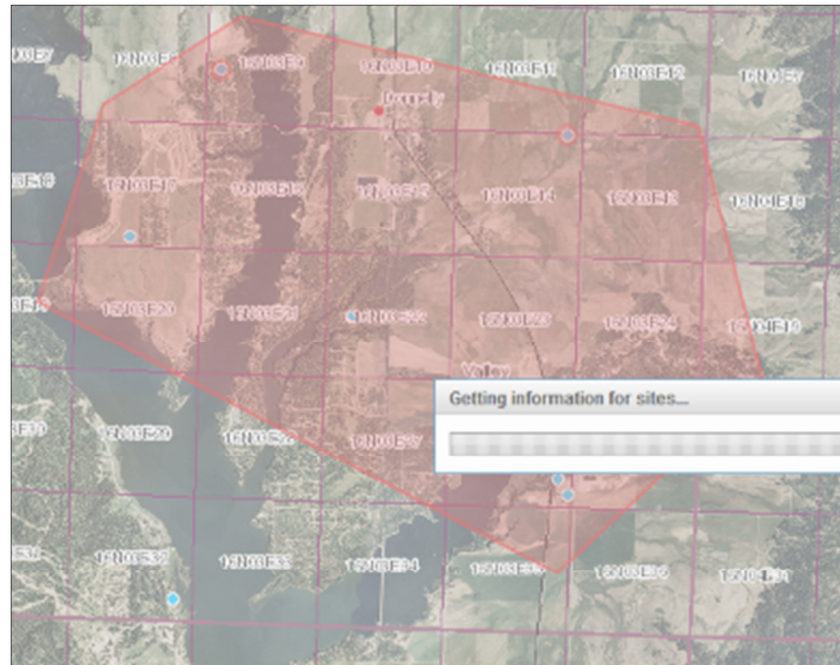
Finally, you will see the “Double-click to complete” tooltip as you add vertices to the polygon.

Double-click the mouse to finish selecting wells.

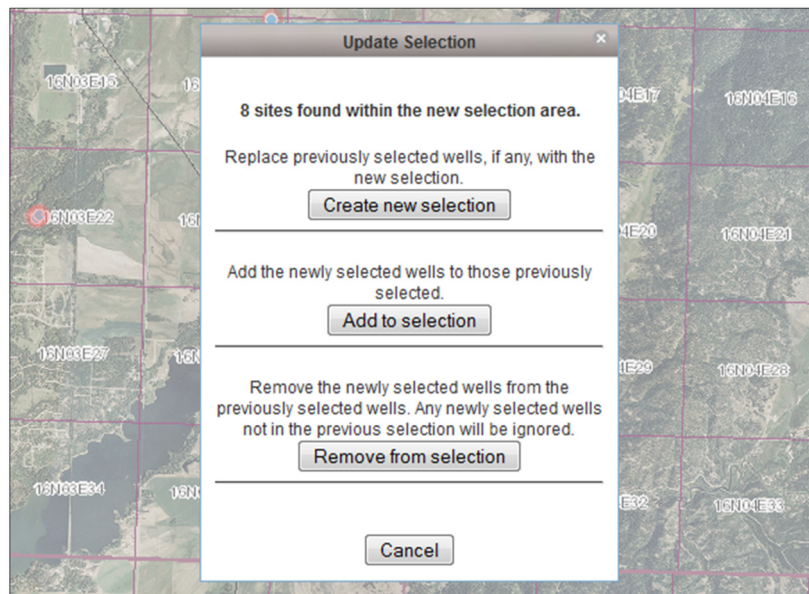
Note: If you see the progress bar before you have finished drawing the polygon, wait for it to disappear and continue drawing.



The map will be overlaid with a shadow to indicate that you cannot interact with it. You will see a progress bar and the message “Getting information for sites...”



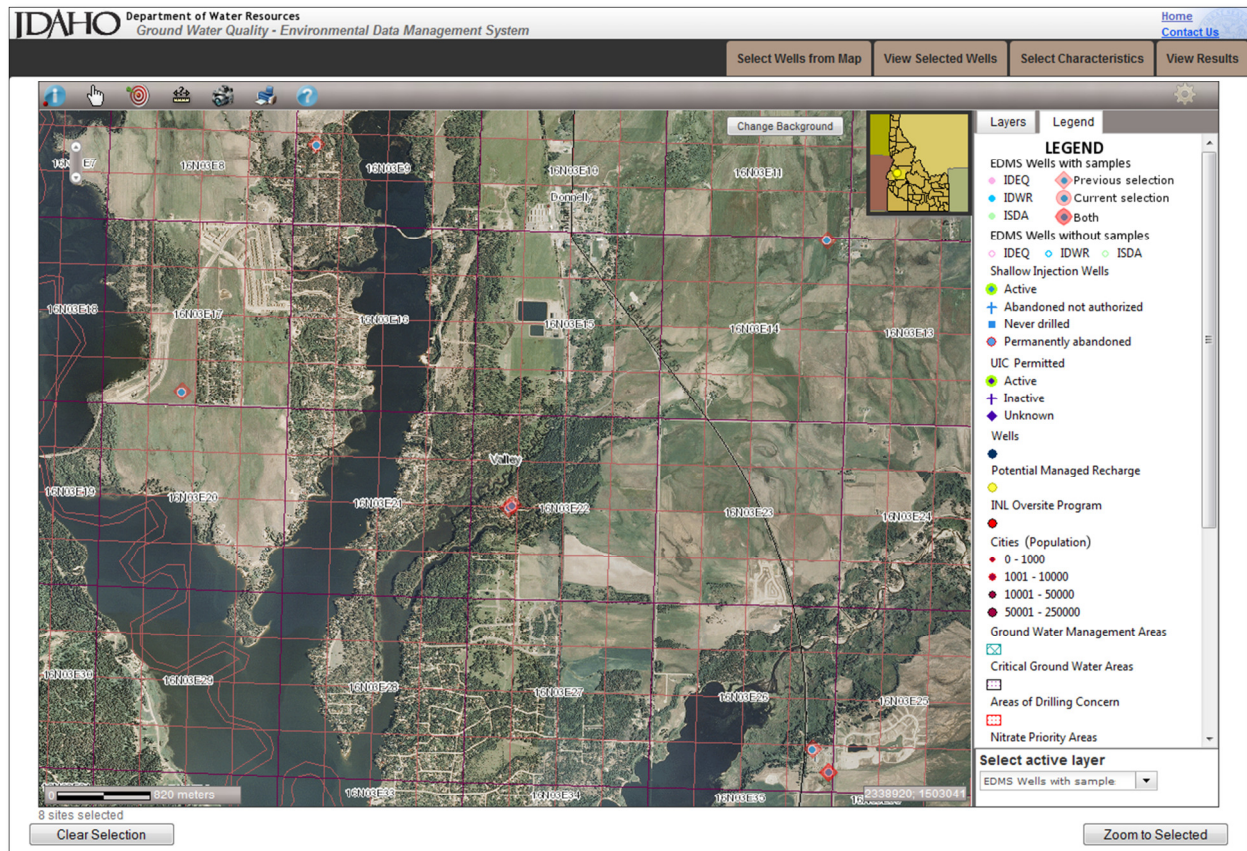
Once the wells have been located, the way in which the symbols representing the wells are drawn will change – refer to the documentation on the Legend to see details about the symbols. The **Update Selection** menu will pop up. Note that the number of sites selected is not yet reflected in the number below the map.



Even though you have chosen wells using the polygon selection tool, you have not modified the set of wells on which queries will be based.

Make your selection from the **Update Selection** menu in order to modify the set.

The number of sites selected will be reflected in the number below the map. In the example below, the user chose to **Create new selection**.



You always have the option of clearing the selected wells using the button located beneath the lower, left corner of the map.

If, during map navigation, you can no longer find the wells you have selected, use the **Zoom to Selected** button to re-center the map on your selection.

Search for a Well by ID or Name

Use the *search* tool to find a specific well-site by EDMS Well ID, Agency Well, Well Name, Well Construction ID, USGS or Site ID. The *search* tool is discussed in the section entitled **Appendix A – Searching for Features**.

Displaying the Table of Well Attributes

Click the **View Selected Wells** tab, above the toolbar, to move to the page that displays details, stored in the EDMS database, about the the wells you selected.

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Ground Water Quality - Environmental Data Management System

Home
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Select Wells from Map View Selected Wells Select Characteristics View Results

Selected Wells

Agency	Elevation	MetalTag	USGS Site ID	Depth	Legal Description	Well Name	WC Well ID	Latitude	Longitude	WaterUse	SiteUse
ID360	4889	---	444122116025401	65	16N 03E 28 SESESE	16N 03E 28CDA1	389414	44.69306	-116.04848	Domestic	Destroyed
ID360	4889	---	444122116025402	45	16N 03E 28 SESESE	16N 03E 28CDA2	291830	44.69306	-116.04848	Unused	Water
ID360	4885	---	444126116025701	38.5	16N 03E 26 NESESE	16N 03E 26CDA2	292476	44.69633	-116.05027	Domestic	Water
ID360	4847	---	444234116045901	65	16N 03E 22 NENWSE	16N 03E 22CBA1	293995	44.70937	-116.08405	Recreation	Destroyed
ID360	4847	---	444234116045902	55.5	16N 03E 22 NENWSE	16N 03E 22CBA2	291053	44.709138	-116.084388	Recreation	Water
ID360	4849	---	444302116071001	52	16N 03E 17 SESESE	16N 03E 17CDA1	352619	44.71767	-116.120084	Domestic	Water
ID360	4875	---	44435116030001	110	16N 03E 14 NENWSE	16N 03E 14AAB1	388807	44.730805	-116.050055	Domestic	Water
ID360	4849	---	44441511601901	55.5	16N 03E 09 NENWSE	16N 03E 09CBA1	292744	44.737361	-116.100583	Domestic	Water

8 sites selected.

Click on a record to see well construction details, including a link to the well driller's log.

You may click on a row, to see the information stored in the IDWR's well-construction database for that site. That display includes a link to the image of the Well Driller's well log, if one exists. Note, if the *WC Well ID* field shows "---" no driller's report exists for that well.

Details

Well Construction Details

Well ID 291653 **Permit ID 736290**

Owner SISCRA CAMPGROUND

IDTM (NAD83) E 2334888.80 ,N 1502977.35 **Metal tag(s) ---**

VALLEY County **Legal Description 16N 03E 22 SW NW --**

Casing Depth 0 **Casing Diameter 0.00**

Total Depth 0 **Static Water Level 0**

Primary Well Use Domestic-Single Residence

Driller's Report [Click here](#)

Persons using information from this site for official purposes, or other purposes, for which accuracy and completeness are required, are hereby notified that they should first verify the information with the public records or other primary sources from which the information was obtained.

Selecting Water Quality Characteristics

Click the **Select Characteristics** tab, above the toolbar, to move to the page that allows you to select the water quality characteristics for which you wish to see results. In the example below, six characteristics were selected. We are telling the application that we wish to see all results, without regard to sample date or whether there were detections. If there are water quality categories you are not interested in, you may narrow the list of **Available Characteristics** by removing the check-marks from any of the **Characteristic Types**.

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Ground Water Quality - Environmental Data Management System

Home
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Select Wells from Map View Selected Wells Select Characteristics View Results

Options

Characteristic Types

- ☒ Physical Properties
- ☒ Inorganics
- ☒ Nutrients
- ☒ Organics
- ☒ Volatile Organic Compounds (VOCs)
- ☒ Pesticides / Herbicides
- ☒ Biological Compounds
- ☒ Radiochemistry
- ☒ Not yet assigned

Pre-defined Query Sets

Filter Results by:

Detection Level

- ☒ Regardless of detection
- ☐ Only detections

Sampling Date

Starting year

Ending year

☒ All years

Characteristics

Available Characteristics

- Total Hydrocarbon
- Monuron
- Methyl iodide
- 17-alpha-Ethinyl estradiol
- 3-beta-Coprostanol
- beta-Sitosterol
- beta-Stigmastanol
- Cholesterol
- Equilenin
- Estradiol
- Estrone
- Fecal Coliform
- Escherichia coli
- Total Coliform
- 15N Enrichment
- Alpha, Gross
- Radium-226
- Strontium-90
- Uranium-234
- Uranium-235
- Uranium-238
- Antimony-125

Request or Remove All

Find alias

Requested Characteristics

- Total Suspended Solids
- pH
- Arsenic
- Nitrate
- Beta, Gross
- Radon-222

Instructions: Click available characteristics to move them into the requested characteristics list. Click arrow-buttons in the center column to move an entire group of characteristics between lists. You may drag requested items within the list to change the order in which they are reported.

Selecting Characteristics by Group

This application provides pre-defined query sets to allow the user to request sets of characteristics which are commonly grouped together for analysis.

Add one of these sets to your request by selecting it from the drop-down list. You may add as many sets as you wish.

Pre-defined Query Sets

Simple Anions (F, Cl, Br, I)

Major Anions (Cl, HCO₃, SO₄)

Major Cations (Ca, Mg, Na, K)

Heavy Metals (Selected Heavy Metals)

☒ Regardless of detection

Selecting Characteristics by Alias



If you cannot find an item in the list of available characteristics you can search for it by common name, synonym, alias, CAS registry number or STORET parameter code.

To select by alias, click the **Find alias** button.

Find Alias or Synonym

Enter the name you wish to search for

perc

Find

Enter the search string in the pop-up window and click the **Find** button.

You will see a new window with all of the records containing the search-string. Since units and descriptive text are searched, the query may return unwanted or unexpected results.

In the case of the 'perc' example, the word 'percent' adds unintended records.

Find Alias or Synonym

Your search for 'perc' yielded 14 records.

Click on a name to add it to the requested characteristics

Name	Type	Synonym
<u>Calcium</u>	Inorg	Calcium, suspended sediment smaller than 62.5 microns, total digestion, dry weight, percent (34833)
<u>Carbon Tetrachloride</u>	VOC	Perchloromethane
<u>Chloride</u>	Inorg	Perchloride
<u>Dissolved Oxygen</u>	Inorg	OXYGEN PERCENT OF VOL (85550)
<u>Hexachlorobenzene</u>	Pest	Perchlorobenzene
<u>Hexachlorobutadiene</u>	VOC	Perchloro-1,3-butadiene
<u>Hexachlorobutadiene</u>	VOC	Perchlorobutadiene
<u>Iron</u>	Inorg	IRON TOT REMOVAL PERCENT (82218)
<u>Sodium</u>	Inorg	PERCENT SODIUM % (00932)
<u>Tetrachloroethylene</u>	VOC	Perchlorethylene
<u>Tetrachloroethylene</u>	VOC	Perchloroethene
<u>Tetrachloroethylene</u>	VOC	Perchloroethylene
<u>Tetrachloroethylene</u>	VOC	PERC
<u>Tetrachloroethylene</u>	VOC	Perclene

Close

Find alias

Instructions: Click available characteristics to move them to the Requested Characteristics list. Click arrow-buttons in the center column to move an item between lists. You may drag requested items within the list as they are reported.

Click the name of the characteristic you wish to add to your request. The characteristic will be added to the **Requested Characteristics** list (and to the water quality results requested for download) as **Tetrachloroethylene**, not **Perchlorethylene**, for example.

Viewing Query Results

Click the **View Results** tab, above the toolbar, to move to the page that shows you what you've won!
Click on column heading to sort by the values in that column. Note, numeric values will not sort correctly since the columns are formatted as character-strings (to allow inclusion of special characters).
Click the **Download CSV** button to retrieve the records in comma-separated-variables format.

IDAHO Department of Water Resources Ground Water Quality - Environmental Data Management System							Home Contact Us	
							Select Wells from Map	View Selected Wells
							Select Characteristics	View Results
EDMS Results								
Agency	Well #	Well Name	Sample Date	Type	Name	Value	Units	
IDWR	1312	16N 03E 2600DA1	19941006	Inorg	Arsenic	1	ug/L	
IDWR	1312	16N 03E 2600DA1	19941006	Nutr	Nitrate	<0.050	mg/l as N	
IDWR	1312	16N 03E 2600DA1	19941006	Nutr	Nitrate	ND	ug/L as N	
IDWR	1312	16N 03E 2600DA1	19941006	Phys	pH	6.7	pH	
IDWR	1312	16N 03E 2600DA1	19941006	Phys	Solids	91	mg/L	
IDWR	1312	16N 03E 2600DA1	19941006	Rad	Beta, Gross	1.0 ± 0.5	pCi/l	
IDWR	1312	16N 03E 2600DA1	19941006	Rad	Radon-222	290 ± 20	pCi/L	
IDWR	1313	16N 03E 2600DA2	19980804	Inorg	Arsenic	<1	ug/L	
IDWR	1313	16N 03E 2600DA2	19980804	Nutr	Nitrate	.923	mg/l as N	
IDWR	1313	16N 03E 2600DA2	19980804	Phys	pH	6.1	pH	
IDWR	1313	16N 03E 2600DA2	19980804	Phys	Solids	45	mg/L	
IDWR	1313	16N 03E 2600DA2	19980804	Rad	Beta, Gross	1.7 ± 0.0	pCi/l	
IDWR	2043	16N 03E 2600AB2	20030807	Inorg	Arsenic	<0.26	ug/L	
IDWR	2043	16N 03E 2600AB2	20030807	Nutr	Nitrate	0.017	mg/l as N	
IDWR	2043	16N 03E 2600AB2	20030807	Phys	pH	5.8	pH	
IDWR	2043	16N 03E 2600AB2	20030807	Phys	Solids	44	mg/l	
IDWR	2043	16N 03E 2600AB2	20030807	Rad	Beta, Gross	2.0 ± 0.5	pCi/l	
IDWR	2043	16N 03E 2600AB2	20070905	Inorg	Arsenic	<0.12	ug/l	
IDWR	2043	16N 03E 2600AB2	20070905	Nutr	Nitrate	0.51	mg/l as N	
IDWR	2043	16N 03E 2600AB2	20070905	Phys	pH	7	pH	
IDWR	2043	16N 03E 2600AB2	20070905	Phys	pH	6	pH	
IDWR	2043	16N 03E 2600AB2	20070905	Phys	Solids	49	mg/l	
IDWR	1315	16N 03E 22CBA1	19940907	Inorg	Arsenic	2	ug/L	
IDWR	1315	16N 03E 22CBA1	19940907	Nutr	Nitrate	ND	ug/L as N	
IDWR	1315	16N 03E 22CBA1	19940907	Nutr	Nitrate	<0.050	mg/l as N	
IDWR	1315	16N 03E 22CBA1	19940907	Phys	pH	6.3	pH	
IDWR	1315	16N 03E 22CBA1	19940907	Phys	Solids	93	mg/L	
IDWR	1315	16N 03E 22CBA1	19940907	Rad	Beta, Gross	1.5 ± 0.8	pCi/l	
IDWR	1315	16N 03E 22CBA1	19940907	Rad	Radon-222	100 ± 17	pCi/L	
IDWR	1316	16N 03E 22CBA2	19980804	Inorg	Arsenic	2	ug/L	
IDWR	1316	16N 03E 22CBA2	19980804	Nutr	Nitrate	<0.050	mg/l as N	

81 records selected, for a combination of 8 wells and 6 water quality characteristics.

[Download CSV](#)

Final Thoughts

Cookies

The information collected from one page to another is stored in local storage on your PC, Mac or hand-held device. You must have cookies enabled in order to use this application. Although you may use the browser's "Back" button to go the previous page, you may cause the application to loose any selections you made on the page you are leaving.

Contacting IDWR

If you have any problems with this application, or have questions not answered by this document, you can contact the IDWR using the information shown below. Please include your telephone number and browser name/version when requesting assistance. Comments on how to make this application better are welcome, of course.





For comments and questions concerning this application, or any of the IDWR's interactive maps, send an e-mail message to GISInfo@idwr.idaho.gov or call the telephone number shown below:

Idaho Department of Water Resources

The Idaho Water Center
322 East Front Street
PO Box 83720
Boise, Idaho 83720-0098
Phone: (208) 287-4800
Fax: (208) 287-6700

Appendix A – Searching for Features

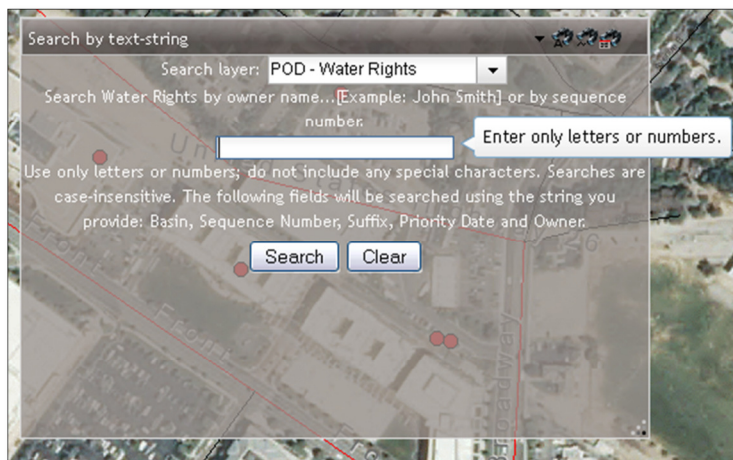
The *search* tool provides two functions for searching/selecting records and one pane to show the results of that search. Clicking on the *search* tool displays a window which has three modes. Each of those modes is accessible by clicking on the appropriate icon on the title bar:

-  **Search by text-string** – find features in a layer by searching selected fields for user-specified text.
-  **Search using a query** – use geometry (point, line or polygon) to select and highlight all features from a given layer.
-  **Search by selecting features** – use geometry (point, line or polygon) to select and highlight all features from a given layer.
-  **Results of search** – display a spreadsheet-like grid containing details for all of the records returned from the search.

The layers available to the search tool vary by application. In general, if a GIS layer is present in the application, is currently visible and has been developed by the IDWR, its records can be searched. The examples below use water rights or EDMS layers to demonstrate the use of the tools – note that the water rights layers are not available in this application but this set of examples was included because it involves a polygonal layer (should one be added to the application after publication of this document); all of the “queryable,” IDWR-maintained layers in this application contain point-data.

Search by Text String

Enter text or numbers without quotation marks or any other punctuation. All searches are case-insensitive.

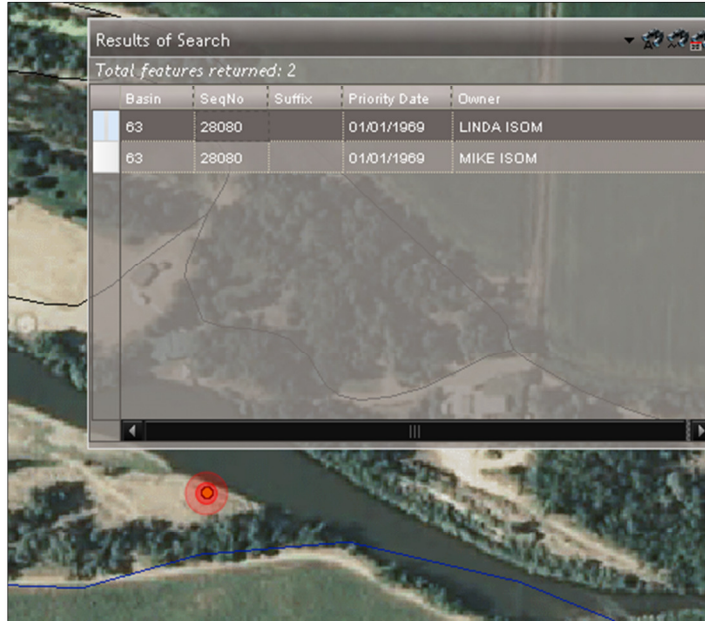


Search by text-string is the default search tool. It is active when you open the search window for the first time. Select a layer to search and then enter (as the tooltip says) the numbers or character string you wish to search for.

The example and the list of fields which will be searched are specific to the layer selected – in this case, only the Basin, Sequence Number, Suffix, Priority Date and Owner fields will be searched.

Searching for the number **28080** yields two *features* from the POD – Water Rights *layer*. Those *features* are not represented within the current *extent* of the map.

Click on one of the rows in the results grid and the map will be zoomed to, and centered on, the *feature* from that row.



Detailed records are available for many of the layers (all of those associated with well construction logs, for example). If more detailed information is available, double-clicking a row will query the database for more details and display it in a new tab or window:

IDAHO DEPARTMENT OF WATER RESOURCES
Water Right Report
4/29/2011
WATER RIGHT NO. 63-28080

Owner Type	Name and Address
Current Owner	LINDA ISOM
Current Owner	MIKE ISOM

Priority Date: 01/01/1969
Basis: Decreed
Status: Active

Hovering over a row in the results grid highlights (with a large semi-transparent ring) the actual area of use associated with water right 63-28080.

Search Using a Query

You can search specific fields by value or range of value. The field-list presented changes when a new search layer is selected. You can query any active layer on the map.

Search using a query

Search layer: EDMS Wells with samples

Field: AgencyAbbr Operator: = Value:

AgencyWellName
WCWellID
ConstructionDate
WellUse

Add field/Value to query

And Or Not ()

Query:

Query Clear Results

Note: The symbol used to draw the selected features is semi-transparent. If multiple features are found in one location, the symbol will appear more opaque.

Not all fields in the table will be available to query. For example, some dates are stored in the database as a string, e.g. "10/20/10" (mm/dd/yy), which provides no 'queryable' information. Where dates are stored in binary, or formatted like "20101020" (yyyymmdd), those fields will be made available for query.

Form the query by selecting a **Field** and an **Operator**, then supplying a **Value** to be searched. Layer-specific examples are provided on the form. The only non-alphanumeric characters allowed in the value box are the wildcard(%) and the dash (-). Do not insert apostrophes or quotation marks in the **Value** text-box.

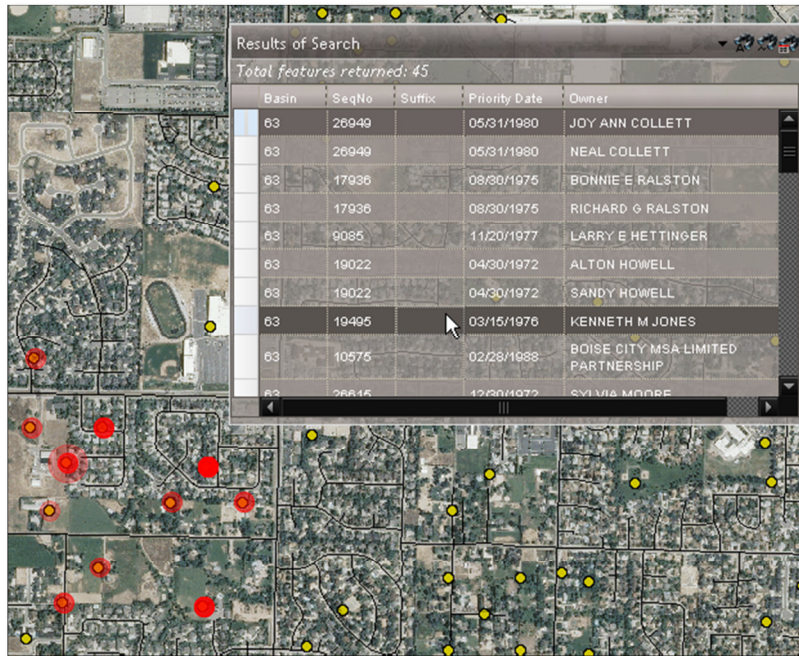
Click the **Add field/value to query** button to add the contents of the **Query** text-box. Note that the application provided the quotation marks to the **WellUse** value because it is stored as a text-string in the database.

If you wish to make a compound query, click one of the **And/Or/Not...** buttons, then repeat the steps to add to the contents of the **Query** text-box. For example, searching for all domestic water-use sites not contributed by the IDWR would be accomplished as follows:

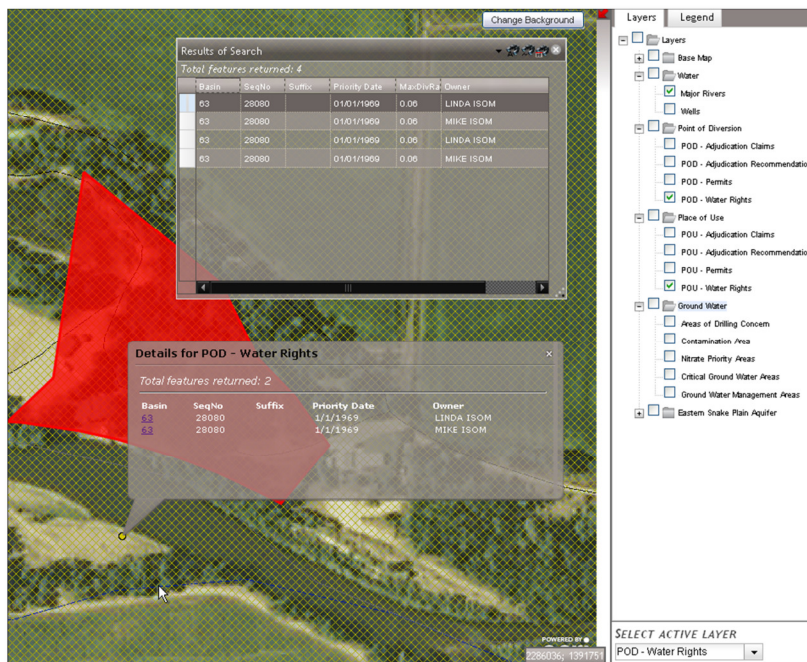
You can fill the **Query** text-box by typing or pasting characters into it.

Search by Selecting Features (by Geometry)

Alternatively, you can select *features* by drawing a polygon around them. This provides grouping, rather than searching, but it does allow you to view the *attributes* for several records at the same time.



As mentioned above, the search layer may be different than the active layer. In the example below the POU – Water Rights layer (the cross-hatched area) covers the entire screen making it impossible to highlight a single place-of-use (POU).



The *identify* tool was used to get the basin and sequence number for the point-of-diversion (POD) for the water right, then the *search* tool was used to find all places of use for that basin-sequence. You may use a similar technique to narrow your selection of water quality sites.

Hovering over a row in the results grid highlights the actual area of use associated with water right 63-28080.

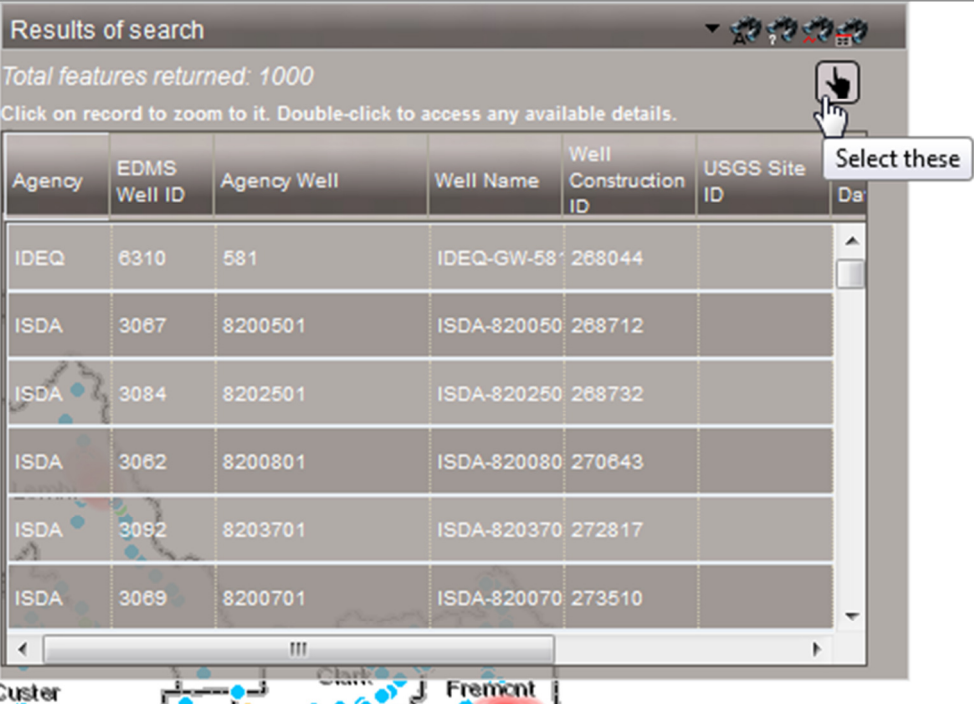
Results of Search

The results of the search (by text, query or geometry) are displayed in a table. The use of the word “results” differs here from the portion of this document pertaining to water quality results.

Each feature discovered by the search is drawn with its proper symbol and then highlighted with a semi-transparent circle. An example of an EDMS site for which water quality samples exist (for the IDWR) is shown as “Current selection” in the legend.

Using These Results

There are a number of reasons for using the search-capabilities of this application. If the layer you are searching is the primary layer for the application, in this case **EDMS Wells with samples**, you will be presented with a **Select these** button. If you click that button you will see the pop-up window with the previously explained options to modify the set of chosen sites.



Results of search

Total features returned: 1000

Click on record to zoom to it. Double-click to access any available details.

Agency	EDMS Well ID	Agency Well	Well Name	Well Construction ID	USGS Site ID	Da
IDEQ	6310	581	IDEQ-GW-581	268044		
ISDA	3067	8200501	ISDA-820050	268712		
ISDA	3084	8202501	ISDA-820250	268732		
ISDA	3062	8200801	ISDA-820080	270643		
ISDA	3092	8203701	ISDA-820370	272817		
ISDA	3069	8200701	ISDA-820070	273510		

Select these

As explained previously, hovering over a row in the results grid highlights (with a large semi-transparent ring) the site detailed in that record. In this example, the rows show only records for domestic water use, for non-IDWR sites.

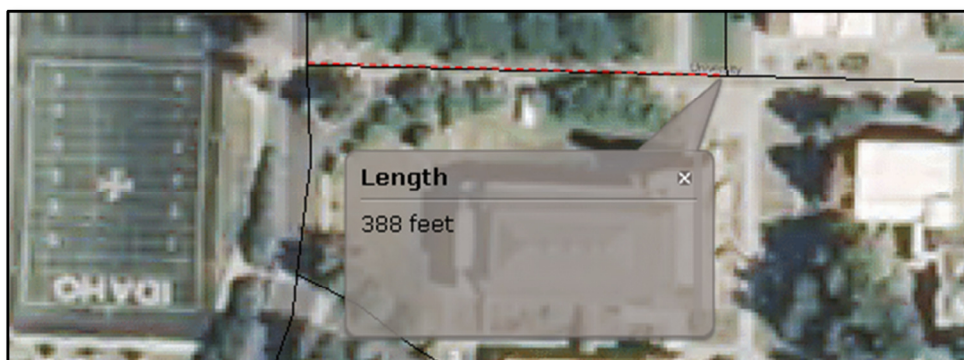
Limitations

There are limits set on the number of records returned from the queries due to networking and hardware considerations. You will be able to see as many as 1000 records resulting from your search. Selection of EDMS wells is currently limited to 200 sites. You can download as many records as you wish, you must manage the sites you select to stay within those limits.

Appendix B – Measuring Distances



Measure distances on the map by clicking the measure tool. Tooltips guide you through the process.



Appendix C – Glossary

The following list of terms is for those of you who are not familiar with internet mapping applications.

General Terminology

GIS – Geographic (or geographical) Information System. The GIS ties IDWR data – wells, water rights, etc. – to locations in Idaho.

Attribute – a characteristic of the data; a value from one of the columns/fields in the database.

Feature – a point, line or polygon that describes the extent of an item in the IDWR's GIS.

Layer – a collection of features of the same type, e.g. streams.

Extent – the scope or limit of the geographical area.

IDTM – Idaho Transverse Mercator is the official coordinate system used to exchange geographic information within the state.

Terms Specific to the Map

Map – the portion of the display used to emulate a paper map.

Navigation – the act of sizing or repositioning the content of the interactive map.

Click – press the mouse button (usually the left button). This application does not provide any functionality to “right-clicking.”

Drag – press and hold the mouse button while moving the mouse. The only use for this (in this application) is as a short-cut to zoom to a specific portion of the map.

Hover – mouse your mouse cursor over an area of the map, icons or menus in order to see more information about that item.

Rubber-band box – if you use the **Shift** and **Ctrl** keys while dragging the mouse you will see a rectangular overlay showing the extent of the area which will be operated on. Used for navigation or feature selection.

Zoom in – view a smaller portion of Idaho (magnify).

Zoom out – view a larger portion of Idaho (minify).

Pan – reposition the map by dragging it in any direction.

Tooltip – small text-boxes which become visible when you place your mouse cursor over certain components.

Map scale – the approximate scale of the map, given as a ratio, e.g. 1:24000.